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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	· CONFIRMATION NO.
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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)
ONE LIBERTY PLACE - 46TH FLOOR
PHILADELPHIA, PA 19103

EXAMINER
STACE, BRENT S

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>30 June 2003</u>.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-20</u> is/are rejected.

7) ☒ Claim(s) <u>1-10 and 15</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>30 June 2003</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some *   c) ☐ None of:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____.

         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20051207</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Remarks

1.   Claims 1-20 have been examined. Claims 1-20 have been rejected. This document is the first Office action on the merits.

Information Disclosure Statement

2.   On record there appears to begin a second NPL entitled "A System for Synthetic Data Generation" from IEEE trailing the NPL in the IDS entitled "Generation of Synthetic Satellite Data with OMEGA." This second NPL is not listed on the IDS as a separate NPL, and therefore, has not been considered.

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 195 and 540. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the

description in compliance with 37 CFR 1.121(b) are required in reply to the Office action

to avoid abandonment of the application. Any amended replacement drawing sheet

should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. Each drawing sheet submitted after the filing

date of an application must be labeled in the top margin as either "Replacement Sheet"

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. The objection to the drawings will not be held in abeyance.

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description: 16, 20, DB Server 4, Data Store 4, and 440. Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. Each drawing sheet submitted after the filing date of

an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next

Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5.   Claims 1-10 and 15 are objected to because of the following informalities:

a.   Claim 1 recites "...deterministic data generation module accepting as input data sets..." on line 4. This is grammatical error. To make the claim clearer the examiner assumes the applicant's intended punctuation was "...deterministic data generation module accepting, as input, data sets..." and will be treated as such for the remainder of this Office action. This objection propagates downward through the respective dependant claims and the dependant claims fails to cure it.

b.   Claim 1 recites "...a seed, the seed acting as input to deterministic data generation..." on line 6. This is typographical error. To make the claim clearer the examiner assumes the applicant's intended words were "...a seed, the seed acting as input to the deterministic data generation ..." and will be treated as such for the remainder of this Office action. This objection propagates downward through the respective dependant claims and the dependant claims fails to cure it.

c.   Claim 8 recites "...the input..." on line 1. To make the claim clearer the examiner assumes the applicant's intended words were "...the non-seed input ..." and will be treated as such for the remainder of this Office action. An alternative, clearer correction would be to amend claim 1 to have a first input from the first limitation, and a second input from the second limitation being the seed. Then, Claim 8 would be amended to "...the first input..." Other

amendments may be necessary to other claims if the second, more preferred, amendment style is used.

d.   Claim 15 recites "...according to a predefine data schema..." on line 2. This is typographical error. The examiner assumes the applicant's intended words were "...according to a predefined data schema..." and will be treated as such for the remainder of this Office action.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.   Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The Claims contain functional descriptive material, but since the claims are not embodied on a medium the function cannot be realized. Alternatively, there is no practical application recited in the Claims. For these reasons, there is no practical application of the claims and the claims are considered non-statutory. The Claims lack useful, concrete, and tangible result.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   Claims 1-10 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10.   Regarding Claim 1, the phrase "and/or" renders the claim(s) indefinite because the scope of the claim(s) unascertainable.

11.   Claim 1 recites the limitation "the exact data" in line 3. There is insufficient antecedent basis for this limitation in the claim. This rejection propagates downward through the respective dependant claims and the dependant claims fails to cure it.

12.   Claim 1 recites the limitation "the sequence of the synthetic data" in line 7. There is insufficient antecedent basis for this limitation in the claim. This rejection propagates downward through the respective dependant claims and the dependant claims fails to cure it.

13.   Claim 9 recites the limitation "the sequential data" in line 2. There is insufficient antecedent basis for this limitation in the claim.

14.   Claim 18 recites the limitation "the range" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

17.   Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

"Quickly Generating Billion-Record Synthetic Databases" (Gray et al.) in view of U.S.

Patent No. 6,324,647 (Bowman-Amuah).

18.   For **Claim 1**, Gray teaches: "A system for generating data [Gray, page 243,

Introduction] comprising:

- a deterministic data generation module, [Gray, page 243, Introduction with Gray,

    page 244, Sequential Database Generation] the deterministic data generation

    module operating to generate the exact data each time the data generation data

    module is operated, [Gray, page 246, Generating Dense Unique Random Data]

    … and

- a seed" [Gray, page 246, program 8 with Gray, page 247, program 13 with Gray,

    page 248, program 18 with Gray, page 250, Generating Non Uniform Data].

    Gray discloses the above limitations but does not expressly teach:

- "...the deterministic data generation module accepting as input data sets and/or data elements from which synthetic data is generated

- ...the seed acting as input to deterministic data generation module, the seed indicating the position in the sequence of the synthetic data."

With respect to Claim 1, an analogous art, Bowman-Amuah, teaches:

- "...the deterministic data generation module accepting as input data sets and/or data elements from which synthetic data is generated; [Bowman-Amuah, cols. 101-102, lines 60-3 with Gray, page 246, Generating Dense Unique Random Data]

- "...the seed acting as input to deterministic data generation module, the seed indicating the position in the sequence of the synthetic data." [Bowman-Amuah, cols. 101-102, lines 60-3]

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Bowman-Amuah with Gray because both inventions are directed towards creating test data for a database application.

Bowman-Amuah's invention would have been expected to successfully work well with Gray's invention because both inventions use databases. Gray discloses quickly generating billion-record synthetic databases comprising data generators, however Gray does not expressly disclose that the seed indicates the position in the sequence of the synthetic data. Bowman-Amuah discloses a system, method and article of manufacture for security management in a development architecture framework comprising test data generation tools.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the test data generation tools from Bowman-Amuah and install it into the invention of Gray, thereby offering the obvious advantage of pulling synthetic/test, repeatable data according to the seed of Gray so that data generation is dynamic according to the database in use by the test data generation tools of Bowman-Amuah and so that the pulling of this data is non strictly numbers as Gray implies which, in turn, pulls the data faster than a system not using the database in use by the test data generation tools of Bowman-Amuah.

19.   **Claim 2** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the deterministic data generation module comprises a computing application" [Gray, page 243, Abstract].

20.   **Claim 3** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 2, wherein the computing application comprises a linear congruential generation function" [Gray, page 243, Abstract].

21.   **Claim 4** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the seed is set for each discrete data element that may want to be re-generated" [Gray, page 246, program 8 with Gray, page 247, program 13 with Gray, page 248, program 18 with Gray, page 250, Generating Non Uniform Data with Bowman-Amuah, col. 102, lines 1-3].

22.   **Claim 5** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system in claim 1, wherein the deterministic data generation module operates in a serial fashion" [Gray, page 244-245, Sequential Database Generation].

23.   **Claim 6** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the deterministic data generation module

operates in a parallel fashion" [Gray, page 245, Parallel Database Generation].

24.   **Claim 7** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the system comprises a database

environment" [Gray, page 243, Introduction].

25.   **Claim 8** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the input comprises any of a range of letters,

a range of numbers, a range of strings, a range of data sets, letters, numbers, strings,

and data sets" [Bowman-Amuah, cols. 101-102, lines 60-3 with Gray, page 246,

Generating Dense Unique Random Data].

26.   **Claim 9** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, further comprising a communication means, [Gray,

page 243, The Computation Model] the communications means operating to

communicate the sequential data to cooperating data environments" [Gray, page 244,

above table 3].

27.   **Claim 10** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 1, wherein the synthetic data is data for use in

benchmarking activities having a predefined data schema definition" [Gray, page 243,

Abstract].

28.   **Claim 11** encompasses substantially the same scope of the invention as that of

Claim 1, in addition to a method and some steps for performing the system elements of

Claim 1. Therefore, Claim 11 is rejected for the same reasons as stated above with respect to Claim 1. In addition, Claim 11 has additional limitations that can also be mapped to Gray (as modified by Bowman-Amuah) as follows: "...wherein within the data set each data element has a sequence number, and the data set is organized such that the data is positioned from lowest sequence number to highest sequence number in a sequential fashion" [Gray, page 248, Generating Indices on Random Data].

29.   **Claim 12** can be mapped to Gray (as modified by Bowman-Amuah) as follows: "The method as recited in claim 11, further comprising communicating the synthesized data to cooperating data environments" [Gray, page 244, above table 3].

30.   **Claim 13** can be mapped to Gray (as modified by Bowman-Amuah) as follows: "The method as recited in claim 11, further comprising changing the value of the seed" [Gray, page 246, program 8 with Gray, page 247, program 13 with Gray, page 248, program 18 with Gray, page 250, Generating Non Uniform Data with Bowman-Amuah, col. 102, lines 1-3].

31.   **Claim 14** can be mapped to Gray (as modified by Bowman-Amuah) as follows: "The method as recited in claim 11, processing the synthesized data by cooperating environments as part of a benchmarking study" [Gray, page 243, Abstract].

32.   **Claim 15** can be mapped to Gray (as modified by Bowman-Amuah) as follows: "The method as recited in claim 11, further comprising schematizing the synthesized data according to a predefine data schema definition" [Gray, page 247, program 13].

33.   **Claim 16** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"A computer medium having computer readable instructions to instruct a computer to

perform the method as recited in claim 11" [Gray, page 243].

34.   **Claim 17** encompasses substantially the same scope of the invention as that of

Claims 1 and 11, in addition to a system to generate repeatable synthetic data and

some elements for performing the method steps of Claim 11 and the system elements

of Claim 1. Therefore, Claim 17 is rejected for the same reasons as stated above with

respect to Claim 1 and 11.

35.   **Claim 18** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 17, wherein the seed comprises a value in the range

from one to the maximum number of data elements of the data set" [Gray, page 246,

Generating Dense Unique Random Data with Gray, page 246, program 8].

36.   **Claim 19** can be mapped to Gray (as modified by Bowman-Amuah) as follows:

"The system as recited in claim 17, further comprising a communicating means, [Gray,

page 243, The Computation Model] the communicating means for use to communicate

the generated synthesized data to cooperating data environments" [Gray, page 244,

above table 3].

37.   **Claim 20** encompasses substantially the same scope of the invention as that of

Claims 1, 11 and 17, in addition to a method and some steps for performing the method

steps of Claim 11, the system elements of claim 17, and the system elements of Claim

1. Therefore, Claim 20 is rejected for the same reasons as stated above with respect to

Claims 1, 11, and 17.

Conclusion

38.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Applicant is advised that, although not used in the rejections

above, prior art cited on the PTO-892 form and not relied upon is considered materially

relevant to the applicant's claimed invention and/or portions of the claimed invention.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Brent S. Stace whose telephone number is 571-272-

8372. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Brent Stace

SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100